Disparities in Human Papillomavirus Knowledge and Awareness Among Sexual Minorities in the United States

Background: HPV, a vaccine-preventable infection and the most common STI, can cause penile (PCa), anal (ACa), oral (OCa), and cervical cancers (CCa). Knowledge/awareness of HPV can prevent HPV-related cancers. Sexual minorities are less likely to be screened and have a higher risk of contracting HPV and HPV-related cancers. However, most HPV interventions and research focus on heterosexuals.

Methods: An analysis of HINTS-5 data assessed the knowledge and awareness of HPV and HPV vaccination among sexual minorities. Regression models estimated the incidence rate ratio (IRR) of HPV awareness, HPV vaccine awareness, and knowledge of HPV-related cancers.

Results: Sexual minorities were unaware of HPV (30.2%), HPV vaccine (27.4%) and HPV caused ACa (70.3%), OCa (76.9%), PCa (73.1%). Participants most likely to have HPV knowledge were men (IRR = 1.26, 95% CI = 1.16-1.37, p < 0.001), college-educated (IRR = 1.52, 95% CI = 1.01-2.29, p = 0.04) and earned over $100,000 (IRR = 1.22, 95% CI = 1.00-1.48, p = 0.05). Participants most likely to have HPV vaccine knowledge were men (IRR = 1.44, 95% CI = 1.32-1.57, p < 0.001), college-educated (IRR = 2.13, 95% CI = 1.40-3.24, p < 0.001) and earned over $100,000 (IRR = 1.21, 95% CI = 1.06-1.39, p = 0.008). Participants most likely to know about HPV-related CCa were men (IRR = 1.46, 95% CI = 1.27-1.68, p < 0.001) whereas participants least likely to know were 45+ years (IRR = 0.70, 95% CI = 0.51-0.96, p = 0.03) and had a regular care provider (IRR = 0.87, 95% CI = 0.76-0.99, p = 0.04). Participants most likely to know about HPV-related PCa were men (IRR = 1.42, 95% CI = 1.05-1.91, p = 0.02) whereas participants least likely to know were 45+ years (IRR = 0.69, 95% CI = 0.49-0.96, p = 0.03). Participants 45+ years were least likely to have HPV related ACa knowledge (IRR = 0.70, 95% CI = 0.51-0.96, p = 0.03).

Conclusion: Awareness of HPV and HPV vaccine was high for sexual minorities; however, knowledge of HPV-related cancers was low. These results demonstrate the ineffectiveness of HPV-related cancer education and call for interventions targeting sexual minorities.